

Permit No. NCS000575

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

PERMIT

TO DISCHARGE STORMWATER UNDER THE

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

**Duke Energy Carolinas, LLC**

is hereby authorized to discharge stormwater from a facility located at:

Asheville Steam Electric Plant  
200 CP&L Drive  
Arden, NC  
Buncombe County

to receiving waters designated as Lake Julian, a class C and an unnamed tributary to Powell Creek, a class C in the French Broad River Basin, in accordance with the discharge limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

This permit shall become effective May 24, 2016

This permit and the authorization to discharge shall expire at midnight on April 30, 2021.

Originally issued the 24<sup>th</sup> day of May, 2016; amended and signed this [Date] day of [Month] 2020.

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*for* Brian Wrenn, Director  
Division of Energy, Mineral and Land Resources  
By the Authority of the Environmental Management Commission

## PART II MONITORING, CONTROLS, AND LIMITATIONS FOR PERMITTED DISCHARGES

### SECTION A: STORMWATER POLLUTION PREVENTION PLAN

The permittee shall **develop and implement** a Stormwater Pollution Prevention Plan (SPPP). The SPPP shall be maintained on site unless exempted from this requirement by the Division. The SPPP is public information in accordance with Part III, Standard Conditions, Section E, paragraph 3 of this permit. The SPPP should also specifically and separately address deconstruction, demolition, coal, and/or coal ash hauling or disposal activities. The SPPP shall include, at a minimum, the following items:

1. **Site Overview.** The Site Overview shall provide a description of the physical facility and the potential pollutant sources that may be expected to contribute to contamination of stormwater discharges. The Site Overview shall contain the following:
  - (a) A general **location map** (USGS quadrangle map or appropriately drafted equivalent map), showing the facility's location in relation to transportation routes and surface waters; the name of the receiving waters to which the stormwater outfalls discharge, or if the discharge is to a municipal separate storm sewer system, the name of the municipality and the ultimate receiving waters; and accurate latitude and longitude of the points of stormwater discharge associated with industrial activity. The general location map (or alternatively the site map) shall identify whether any receiving waters are **impaired** (on the state's 303(d) list of impaired waters) or if the site is located in a **watershed for which a TMDL has been established**, and what the parameters of concern are.
  - (b) A **narrative description** of storage practices, loading and unloading activities, outdoor process areas, dust or particulate generating or control processes, and waste disposal practices. A **narrative description** of the potential pollutants that could be expected to be present in the stormwater discharge from each outfall. The narrative should also reference deconstruction, demolition, coal, and/or coal ash hauling or disposal activities where applicable.
  - (c) A **site map** drawn at a scale sufficient to clearly depict: the site property boundary; the stormwater discharge outfalls; all on-site and adjacent surface waters and wetlands; industrial activity areas (including storage of materials, disposal areas, process areas, loading and unloading areas, and haul roads); site topography and finished grade; all drainage features and structures; drainage area boundaries and total contributing area for each outfall; direction of flow in each drainage area; industrial activities occurring in each drainage area; buildings; stormwater Best Management Practices (BMPs); and impervious surfaces. The site map must indicate the percentage of each drainage area that is impervious, and the site map must include a graphic scale indication and north arrow.

- (d) A **list of significant spills or leaks** of pollutants during the previous three (3) years and any corrective actions taken to mitigate spill impacts.
  - (e) Certification that the stormwater outfalls have been evaluated for the presence of non-stormwater discharges. **The permittee shall submit the first certification no later than 90 days after the effective date of this permit to the Stormwater Permitting Program Central Office and shall re-certify annually that the stormwater outfalls have been evaluated for the presence of non-stormwater discharges.** For any non-stormwater discharge identified, the permittee shall indicate how that discharge is permitted or otherwise authorized. The certification statement will be signed in accordance with the requirements found in Part III, Standard Conditions, Section B, Paragraph 3.
2. **Stormwater Management Strategy.** The Stormwater Management Strategy shall contain a narrative description of the materials management practices employed which control or minimize the stormwater exposure of significant materials, including structural and nonstructural measures. This strategy should also address deconstruction, demolition, coal, and/or coal ash hauling or disposal activities where applicable. The Stormwater Management Strategy, at a minimum, shall incorporate the following:
- (a) **Feasibility Study.** A review of the technical and economic feasibility of changing the methods of operations and/or storage practices to eliminate or reduce exposure of materials and processes to rainfall and run-on flows. Wherever practical, the permittee shall prevent exposure of all storage areas, material handling operations, and manufacturing or fueling operations. In areas where elimination of exposure is not practical, this review shall document the feasibility of diverting the stormwater run-on away from areas of potential contamination.
  - (b) **Secondary Containment Requirements and Records.** Secondary containment is required for: bulk storage of liquid materials; storage in any amount of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) water priority chemicals; and storage in any amount of hazardous substances, in order to prevent leaks and spills from contaminating stormwater runoff. A table or summary of all such tanks and stored materials and their associated secondary containment areas shall be maintained. If the secondary containment devices are connected to stormwater conveyance systems, the connection shall be controlled by manually activated valves or other similar devices (which shall be secured closed with a locking mechanism). Any stormwater that accumulates in the containment area shall be observed for color, foam, outfall staining, visible sheens and dry weather flow, prior to release of the accumulated stormwater. Accumulated stormwater shall be released if found to be uncontaminated by any material. Records documenting the individual making the observation, the description of the accumulated stormwater, and the date and time of the release shall be kept for a period of five (5) years. For facilities subject to a federal oil Spill Prevention, Control, and Countermeasure Plan (SPCC), any portion of the SPCC Plan fully compliant with the requirements of this permit may be used to demonstrate compliance with this permit.

In addition to secondary containment for tankage, the permittee shall provide drip pans or other similar protection measures for truck or rail car liquid loading and unloading stations.

- (c) **BMP Summary.** A listing of site structural and non-structural Best Management Practices (BMPs) shall be provided. The installation and implementation of BMPs shall be based on the assessment of the potential for sources to contribute significant quantities of pollutants to stormwater discharges and on data collected through monitoring of stormwater discharges. The BMP Summary shall include a written record of the specific rationale for installation and implementation of the selected site BMPs. The BMP Summary should also address deconstruction, demolition, coal, and/or coal ash hauling or disposal activities where applicable. The permittee shall refer to the BMPs described in EPA's Multi-Sector Permit (MSGP) and Industrial Stormwater Fact Sheet for Steam Electric Power Generating Facilities (EPA-833-F-06-030) for guidance on BMPs that may be appropriate for this site. The BMP Summary shall be reviewed and updated annually.

3. **Spill Prevention and Response Procedures.** The Spill Prevention and Response Procedures (SPRP) shall incorporate an assessment of potential pollutant sources based on a materials inventory of the facility. Facility personnel responsible for implementing the SPRP shall be identified in a written list incorporated into the SPRP and signed and dated by each individual acknowledging their responsibilities for the plan. A responsible person shall be on-site at all times during facility operations that have increased potential to contaminate stormwater runoff through spills or exposure of materials associated with the facility operations. The SPRP must be site stormwater specific. Therefore, an oil Spill Prevention Control and Countermeasure plan (SPCC) may be a component of the SPRP, but may not be sufficient to completely address the stormwater aspects of the SPRP. The common elements of the SPCC with the SPRP may be incorporated by reference into the SPRP.
4. **Preventative Maintenance and Good Housekeeping Program.** A preventative maintenance and good housekeeping program shall be developed and implemented. The program shall address all stormwater control systems (if applicable), stormwater discharge outfalls, all on-site and adjacent surface waters and wetlands, industrial activity areas (including material storage areas, material handling areas, disposal areas, process areas, loading and unloading areas, and haul roads), all drainage features and structures, and existing structural BMPs.

The program shall establish schedules of inspections, maintenance, and housekeeping activities of stormwater control systems, as well as facility equipment, facility areas, and facility systems that present a potential for stormwater exposure or stormwater pollution where not already addressed under another element of the SPPP. Inspection of material handling areas and regular cleaning schedules of these areas shall be incorporated into the program. Compliance with the established schedules for inspections, maintenance, and housekeeping shall be recorded and maintained in the SPPP. The program should also address deconstruction, demolition, coal, and/or coal

ash hauling or disposal activities where applicable. The Good Housekeeping Program shall also include, but not be limited to, BMPs to accomplish the following:

- (a) Minimize contamination of stormwater runoff from oil-bearing equipment in switchyard areas;
- (b) Minimize contamination of stormwater runoff from delivery vehicles and rail cars arriving and departing the plant site;
- (c) Inspect all residue-hauling vehicles for proper covering over the load, adequate gate-sealing, and overall integrity of the container body. Repair vehicles as necessary; and
- (d) Reduce or control the tracking of ash and residue from ash loading and storage areas;

5. **Facility Inspections.** Inspections of the facility (including tanks, pipes, and equipment) and all stormwater *systems* shall occur as part of the Preventative Maintenance and Good Housekeeping Program at a minimum on a semi-annual schedule, once during the first half of the year (January to June), and once during the second half (July to December), with at least 60 days separating inspection dates (unless performed more frequently than semi-annually). These facility inspections are different from, and in addition to, the stormwater discharge characteristic monitoring *at the outfalls* required in Part II B, and C of this permit.
6. **Employee Training.** Training programs shall be developed and training provided at a minimum on an annual basis for facility personnel with responsibilities for: spill response and cleanup, preventative maintenance activities, and for any of the facility's operations that have the potential to contaminate stormwater runoff. The facility personnel responsible for implementing the training shall be identified, and their annual training shall be documented by the signature of each employee trained.
7. **Responsible Party.** The SPPP shall identify a specific position or positions responsible for the overall coordination, development, implementation, and revision of the SPPP. Responsibilities for all components of the SPPP shall be documented and position assignments provided.
8. **SPPP Amendment and Annual Update.** The permittee shall amend the SPPP whenever there is a change in design, construction, operation, site drainage, maintenance, or configuration of the physical features which may have a significant effect on the potential for the discharge of pollutants to surface waters. **All aspects of the SPPP shall be reviewed and updated on an annual basis.** The annual update shall include:
  - (a) an *updated list of significant spills or leaks* of pollutants for the previous three (3) years, or the notation that no spills have occurred (element of the **Site Overview**);
  - (b) a written *re-certification that the stormwater outfalls have been evaluated for the presence of non-stormwater discharges* (element of the **Site Overview**);

- (c) a documented re-evaluation of the effectiveness of the on-site stormwater BMPs (*BMP Summary* element of the **Stormwater Management Strategy**).
- (d) a *review and comparison of sample analytical data* to benchmark values (if applicable) over the past year, including a discussion about Tiered Response status. The permittee shall use the Division's Annual Summary Data Monitoring Report (DMR) form, available from the Stormwater Permitting Program's website (See 'Monitoring Forms' here: <http://portal.ncdenr.org/web/lr/npdes-stormwater>).

If the Director notifies the permittee that the SPPP does not meet one or more of the minimum requirements of the permit, the permittee shall have 30 days to respond. Within 30 days of such notice, the permittee shall submit a time schedule to the Director for modifying the SPPP to meet minimum requirements. The permittee shall provide certification in writing (in accordance with Part III, Standard Conditions, Section B, Paragraph 3) to the Director that the changes have been made.

- 9. SPPP Implementation.** The permittee shall implement the Stormwater Pollution Prevention Plan and all appropriate BMPs consistent with the provisions of this permit, in order to control contaminants entering surface waters via stormwater. Implementation of the SPPP shall include documentation of all monitoring, measurements, inspections, maintenance activities, and training provided to employees, including the log of the sampling data and of actions taken to implement BMPs associated with the industrial activities, including vehicle maintenance activities. Such documentation shall be kept on-site for a period of five (5) years and made available to the Director or the Director's authorized representative immediately upon request.

## SECTION B: ANALYTICAL MONITORING REQUIREMENTS

Analytical monitoring of stormwater discharges shall be performed as specified in **Tables 1-3**. All analytical monitoring shall be performed during a **measurable storm event** at the specified stormwater discharge outfalls (SDOs) that discharge *stormwater associated with industrial activity* (See Definitions).

A **measurable storm event** is a storm event that results in an **actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DEMLR Regional Engineer. *See Definitions.*

The following parameters shall be monitored during a measurable storm event from the back entrance **access road area**, designated as Outfall SW001, SW003, SW-7, and SW-8 discharging into Lake Julian.

**Table 1. Analytical Monitoring Requirements for Outfall SW001, SW003, SW-7, and SW-8**

Discharge Characteristics	Units	Measurement Frequency <sup>1</sup>	Sample Type <sup>2</sup>	Sample Location <sup>3</sup>
Total Suspended Solids (TSS)	mg/L	semi-annual (quarterly, <i>during coal or ash transport only</i> )	Grab	SDO
Total Rainfall <sup>4</sup>	inches	semi-annual (quarterly, <i>during coal or ash transport only</i> )	Rain Gauge	-
40 CFR Part 423 Appendix A: Priority Pollutant Metals – Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn <sup>5</sup>	mg/L	quarterly, <i>during coal or ash transport only</i>	Grab	SDO
Boron <sup>5</sup>	mg/L	quarterly, <i>during coal or ash transport only</i>	Grab	SDO
pH <sup>5</sup>	standard	semi-annual (quarterly, <i>during coal or ash transport only</i> )	Grab	SDO

**Footnotes:**

- <sup>1</sup> Measurement Frequency: Twice per year (unless other provisions of this permit prompt quarterly or monthly sampling) during a **measurable storm event**, until either another permit is issued for this facility or until this permit is revoked or rescinded. If the facility is monitoring monthly because of Tier Two or Three response actions under the previous permit, the facility shall continue a monthly monitoring and reporting schedule in Tier Two or Tier Three status until relieved by the provisions of this permit or the Division.

- 2 Grab samples shall be collected within the first 30 minutes of discharge. When physical separation between outfalls prevents collecting all samples within the first 30 minutes, sampling shall begin within the first 30 minutes, and shall continue until completed.
- 3 Sample Location: Samples shall be collected at each stormwater discharge outfall (SDO) specified above unless representative outfall status (ROS) has been granted. The permittee may petition the Director for ROS using DEMLR's ROS Request Form. DEMLR may grant ROS if stormwater discharges from a single outfall are representative of discharges from multiple outfalls. Approved ROS will reduce the number of outfalls where the analytical sampling requirements apply and will be documented in a letter to the permittee. A copy of the Division's letter granting ROS shall be kept on site.
- 4 For each sampled measurable storm event, the total precipitation must be recorded. An on-site rain gauge is required. Where isolated sites are unmanned for extended periods of time, a local rain gauge reading may be substituted for an on-site reading.
- 5 These parameters shall be monitored only if coal or coal ash is transported through the drainage areas of these outfalls during the quarterly monitoring period in **Table 4**. Mercury shall be measured by EPA Method 1631E.

The stormwater outfalls identified as SW004, SW005, and SW006 (outfalls along the main entrance) are not associated with industrial activities. Any modifications to these outfalls that result in a potential stormwater discharge associated with past or present industrial activities will require a modification to this permit.

The parameters in **Table 2** shall be monitored during a measurable storm event discharging from the exterior stormwater drains around the power house to two stormwater collection basins, via outfalls SW009 and SW010. **Sampling at outfall SW010 shall be conducted at the SDO, unless the permittee can justify to the Division that sampling at the SDO presents significant risk to human health.** Outfalls SW009 and SW010 discharge to a slope which has been stabilized by riprap and then to a wetland which ultimately flows into the French Broad River. **Monitoring for Priority Pollutant Metals and Boron, listed in Table 2, can be discontinued after four consecutive sampling events with no benchmark exceedances for these parameters.**

**Table 2. Analytical Monitoring Requirements for Outfall SW009 and SW010**

Discharge Characteristics	Units	Measurement Frequency <sup>1</sup>	Sample Type <sup>2</sup>	Sample Location <sup>3</sup>
Total Suspended Solids (TSS)	mg/L	semi-annual	Grab	SDO
Total Rainfall <sup>4</sup>	inches	semi-annual	Rain Gauge	-
pH	standard	semi-annual	Grab	SDO
40 CFR Part 423 Appendix A: Priority Pollutant Metals – Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn	mg/L	semi-annual	Grab	SDO
Boron	mg/L	semi-annual	Grab	SDO

Footnotes:



1-4 Refer to Table 1, Footnotes 1-4

The Parameters in **Table 3** shall be monitored during a measurable storm event discharging from the access roads and coal ash haul for the new proposed coal combustion residual (CCR) landfill, via outfalls SW011, SW012, and SW013. Outfalls SW011, SW012, and SW013 discharge into an unnamed tributary, then to Powell Creek and then to the French Broad River. The monitoring frequency will be quarterly for all parameters in Table 3 and will be allowed to move to a semi-annual monitoring frequency after four consecutive quarterly monitoring events with no benchmark exceedances post-landfill closure.

At the time of the issuance of this permit major modification outfall SW013 is a ditch. The permittee has notified the Division of plans to add a discharge point at the designated sampling location for outfall SW013.

**Table 3. Analytical Monitoring Requirements for Outfall SW011, SW012, and SW013**

<u>Discharge Characteristics</u>	<u>Units</u>	<u>Measurement Frequency<sup>1</sup></u>	<u>Sample Type<sup>2</sup></u>	<u>Sample Location<sup>3</sup></u>
<u>Total Suspended Solids (TSS)</u>	<u>mg/L</u>	<u>quarterly, semi-annual</u>	<u>Grab</u>	<u>SDO</u>
<u>Total Rainfall<sup>4</sup></u>	<u>inches</u>	<u>quarterly, semi-annual</u>	<u>Rain Gauge</u>	<u>=</u>
<u>40 CFR Part 423 Appendix A: Priority Pollutant Metals – Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn</u>	<u>mg/L</u>	<u>quarterly, semi-annual</u>	<u>Grab</u>	<u>SDO</u>
<u>Boron</u>	<u>mg/L</u>	<u>quarterly, semi-annual</u>	<u>Grab</u>	<u>SDO</u>
<u>pH</u>	<u>standard</u>	<u>quarterly, semi-annual</u>	<u>Grab</u>	<u>SDO</u>

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**Footnotes:**

- 1 Measurement Frequency: Twice per year (unless other provisions of this permit prompt quarterly or monthly sampling) during a measurable storm event, until either another permit is issued for this facility or until this permit is revoked or rescinded. If the facility is monitoring monthly because of Tier Two or Three response actions under the previous permit, the facility shall continue a monthly monitoring and reporting schedule in Tier Two or Tier Three status until relieved by the provisions of this permit or the Division.
- 2 Grab samples shall be collected within the first 30 minutes of discharge. When physical separation between outfalls prevents collecting all samples within the first 30 minutes, sampling shall begin within the first 30 minutes, and shall continue until completed.
- 3 Sample Location: Samples shall be collected at each stormwater discharge outfall (SDO) specified above unless representative outfall status (ROS) has been granted. The permittee may petition the Director for ROS using DEMLR's ROS Request Form. DEMLR may grant ROS if stormwater discharges from a single outfall are representative of discharges from multiple outfalls. Approved ROS will reduce the number of outfalls where the analytical sampling requirements apply and will be documented in a letter to the permittee. A copy of the Division's letter granting ROS shall be kept on site.

<sup>4</sup> For each sampled measurable storm event, the total precipitation must be recorded. An on-site rain gauge is required. Where isolated sites are unmanned for extended periods of time, a local rain gauge reading may be substituted for an on-site reading.

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Should the permittee **identify or create any new stormwater outfalls; remove any stormwater outfalls** identified in this permit; or **alter any drainage areas** that change the potential pollutants in runoff discharged through corresponding outfalls, the permittee will submit a request to NC DEMLR to modify this permit. For any newly discovered pipes or outfalls, the permittee must evaluate the structure and provide a report of the status and planned actions to NC DENR within 14 days. The permittee must either (1) request modification of this permit and modify the SPPP accordingly, or (2) eliminate potential discharges by removal, plugging, or combination of both.

The permittee shall complete the analytical samplings in accordance with the schedule specified in **Table 4**, unless *adverse weather* conditions prevent sample collection (see *Adverse Weather* in Definitions). Similarly, sampling is not required outside of the facility's normal operating hours. A **minimum of 60 days must separate Period 1 and Period 2 sample dates**, unless monthly monitoring has been instituted under a "Tier Two" response. Inability to sample because of adverse weather conditions must be documented in the SPPP and recorded on the DMR. The permittee must report the results from each sample taken within the monitoring period (see Part III, Section E). However, for purposes of benchmark comparison and Tiered response actions, the permittee shall use the analytical results from **the first sample with valid results** within the monitoring period.

**Table 4. Monitoring Schedule**

Monitoring period <sup>1,2</sup>	Sample Number	Start	End
Year 1 – Period 1	1	May 24, 2016	December 31, 2016
Year 1 – Period 2	2	January 1, 2017	June 30, 2017
Year 2 – Period 1	3	July 1, 2017	December 31, 2017
Year 2 – Period 2	4	January 1, 2018	June 30, 2018
Year 3 – Period 1	5	July 1, 2018	December 31, 2018
Year 3 – Period 2	6	January 1, 2019	June 30, 2019
Year 4 – Period 1	7	July 1, 2019	December 31, 2019
Year 4 – Period 2	8	January 1, 2020	June 30, 2020
Year 5 – Period 1	9	July 1, 2020	December 31, 2020
Year 5 – Period 2	10	January 1, 2021	April 30, 2021

**Footnotes:**

- 1 Maintain monitoring until either another permit is issued for this facility or until this permit is revoked or rescinded. The permittee must submit an application for renewal of coverage before the submittal deadline (180 days before expiration) to be considered for renewed coverage under the permit. The permittee must continue analytical monitoring throughout the permit renewal process, even if a renewal permit is not issued until after expiration of this permit.
- 2 If no discharge occurs during the sampling period, the permittee must submit a monitoring report indicating "No Flow" or "No Discharge" within 30 days of the end of the sampling period.

Failure to monitor per permit terms may result in the Division requiring monthly monitoring for all parameters for a specified time period. “No discharge” from an outfall during a monitoring period does not constitute failure to monitor, as long as it is properly recorded and reported.

Proposed NPDES Wastewater Permit NC0000396 requires the facility to conduct **fish tissue monitoring** once during that permit term for arsenic (As), selenium (Se), and mercury (Hg) in accordance with a Sampling Plan approved by the Division of Water Resources. The permittee shall submit annually a summary of the results of the fish tissue monitoring results to the DEMLR Stormwater Permitting Program (Central Office) and indicate the location of sampling in relation to stormwater discharge outfalls. This reporting timeframe differs from the NPDES Wastewater Permit, which directs that fish tissue analysis results be submitted with the wastewater discharge permit renewal application.

The permittee shall compare monitoring results to the benchmark values in **Table 5**. Exceedances of benchmark values require the permittee to increase monitoring, increase management actions, increase record keeping, and/or install stormwater Best Management Practices (BMPs) in a tiered program. See below the descriptions of **Tier One**, **Tier Two**, and **Tier Three** response actions below. In the event that the Division releases the permittee from continued monthly monitoring and reporting under Tier Two or Tier Three, the Division’s release letter may remain in effect through subsequent reissuance of this permit, unless the release letter provides for other conditions or duration.

**Table 5. Benchmark Values for Analytical Monitoring**

Discharge Characteristics	Units	Benchmark
Antimony (Sb), Total Recoverable	mg/L	0.09
Arsenic (As), Total Recoverable	mg/L	0.34
Beryllium (Be), Total Recoverable	mg/L	0.065
Cadmium (Cd), Total Recoverable <sup>1</sup>	mg/L	0.003
Chromium (Cr), Total Recoverable <sup>1</sup>	mg/L	0.9
Copper (Cu), Total Recoverable <sup>1</sup>	mg/L	0.010
Lead (Pb), Total Recoverable <sup>1</sup>	mg/L	0.075
Mercury (Hg), Total Recoverable <sup>2</sup>	ng/L	N/A <sup>2</sup>
Nickel (Ni), Total Recoverable <sup>1</sup>	mg/L	0.335
Polychlorinated biphenyl compounds (PCBs)	µg/L	Detected
Selenium (Se), Total Recoverable	mg/L	0.056
Silver (Ag), Total Recoverable <sup>1</sup>	mg/L	0.0003

Discharge Characteristics	Units	Benchmark
Zinc (Zn), Total Recoverable <sup>1</sup>	mg/L	0.126
Total Suspended Solids (TSS)	mg/L	100
Non-Polar Oil & Grease by <i>EPA Method 1664 (SGT-HEM)</i>	mg/L	15
pH <sup>3</sup>	standard	6 – 9 <sup>3</sup>
Boron (B)	mg/L	N/A (monitor only)
Thallium (Tl), Total Recoverable <sup>1</sup>	mg/L	N/A (monitor only)

**Footnotes:**

- 1 Hardness- dependent. Benchmark based on translation of dissolved value into total recoverable with an assumed hardness of 25 mg/l and a total suspended solids (TSS) concentration of 10 mg/l.
- 2 Values above the North Carolina water quality standard for mercury (12 ng/l) should be noted on the DMR but **do not trigger Tier responses**. *Concentrations in field blanks or method blanks associated with the sample may be subtracted from the results for that sample, as long as all documentation of the adjustment is provided with the DMR.*
- 3 If pH values outside this range are recorded in sampled stormwater discharges, but ambient precipitation pH levels are lower, then the lower threshold of this benchmark range is the pH of the precipitation (within instrument accuracy) instead of 6 S.U. Readings from an on-site or local rain gauge (or local precipitation data) must be documented to demonstrate background concentrations were below the benchmark pH range of 6- 9.

The benchmark values in **Table 5** are not permit limits but should be used as guidelines for implementation of the permittee's SPPP. An **exceedance of a stormwater benchmark value is not a permit violation**; however, failure to respond to the exceedance as outlined in this permit is a violation of permit conditions.

Tier One
<b>If:</b> The <b>first valid sampling results</b> are above a benchmark value, or outside of the benchmark range, for any parameter at any outfall;
<b>Then:</b> The permittee shall: <ol style="list-style-type: none"> <li>1. Conduct a stormwater management inspection of the facility <b>within two weeks of receiving sampling results</b>.</li> <li>2. Identify and evaluate possible causes of the benchmark value exceedance.</li> <li>3. Identify potential, and select the specific feasible: source controls, operational controls, or physical improvements to reduce concentrations of the parameters of concern, and/or to bring concentrations within the benchmark range.</li> <li>4. Implement the selected feasible actions <b>within two months of the inspection</b>.</li> <li>5. Record each instance of a Tier One response in the SPPP. Include the date and value of the benchmark exceedance, the inspection date, the personnel conducting the inspection, the selected actions, and the date the selected actions were implemented.</li> <li>6. Immediately institute monthly monitoring and reporting for <u>all parameters</u>. The permittee shall conduct monthly monitoring at every outfall where a sampling result exceeded the benchmark value. Monthly (analytical and qualitative) monitoring shall continue until three consecutive sample results are below the benchmark values or within benchmark range.</li> <li>7. Note: Benchmark exceedances for a different parameter separately trigger a tiered response.</li> </ol>

Tier Two	
<b>If:</b> The <b>first valid sampling results</b> from two consecutive monitoring periods are above the benchmark values, or outside of the benchmark range, for any specific parameter at a specific discharge outfall;	
<b>Then:</b> The permittee shall: <ol style="list-style-type: none"> <li>1. Repeat all the required actions outlined above in Tier One.</li> <li>2. Continue monthly monitoring and reporting for <b>all parameters</b>. The permittee shall conduct monthly monitoring at every outfall where a sampling result exceeded the benchmark value for two consecutive samples. Monthly (analytical and qualitative) monitoring shall continue until three consecutive sample results are below the benchmark values or within benchmark range.</li> <li>3. If no discharge occurs during the sampling period, the permittee is required to submit a monthly monitoring report indicating "No Flow" to comply with reporting requirements.</li> <li>4. <i>Alternatively</i>, in lieu of steps 2 and 3, the permittee may, after two consecutive exceedances, exercise the option of contacting the DEMLR Regional Engineer as provided below in Tier Three. The Regional Engineer may direct the response actions on the part of the permittee as provided in Tier Three, including reduced or additional sampling parameters or frequency.</li> <li>5. If pursuing the alternative above after two consecutive exceedances, the permittee may propose an <b>alternative monitoring plan</b> for approval by the Regional Engineer.</li> <li>6. Maintain a record of the Tier Two response in the SPPP.</li> <li>7. Continue Tier Two response obligations throughout the permit renewal process.</li> </ol>	

Tier Three	
<b>If:</b> The <b>valid sampling results required for the permit monitoring periods</b> exceed the benchmark value, or are outside the benchmark range, for any specific parameter at any specific outfall on <b>four occasions</b> , the permittee shall notify the DEMLR Regional Engineer in writing <b>within 30 days of receipt of the fourth analytical results</b> ;	
<b>Then:</b> The Division <b>may but is not limited to:</b> <ul style="list-style-type: none"> <li>• require that the permittee revise, increase, or decrease the monitoring and reporting frequency for some or all of the parameters herein;</li> <li>• require sampling of additional or substitute parameters;</li> <li>• require the permittee to install structural stormwater controls;</li> <li>• require the permittee to implement other stormwater control measures;</li> <li>• require the permittee to perform upstream and downstream monitoring to characterize impacts on receiving waters; or</li> <li>• require the permittee implement site modifications to qualify for a No Exposure Exclusion;</li> <li>• require the permittee to continue Tier Three obligations through the permit renewal process.</li> </ul>	

If a Total Maximum Daily Load (TMDL) is developed and approved for Lake Julian, or if this body of water becomes impaired, the permittee may be required to monitor for the pollutant(s) of concern in the future and submit results to the Division. The Division will consider the monitoring results in determining whether additional BMPs are needed to control the pollutant(s) of concern to the maximum extent practicable.

If additional BMPs are needed to achieve the required level of control, the permittee will be required to (1) develop a strategy for implementing appropriate BMPs, and (2) submit a timetable for incorporation of those BMPs into the Stormwater Pollution Prevention Plan.

## SECTION C: QUALITATIVE MONITORING REQUIREMENTS

The purpose of qualitative monitoring is to evaluate the effectiveness of the Stormwater Pollution Prevention Plan (SPPP) and identify new potential sources of stormwater pollution. Qualitative monitoring of stormwater outfalls must be performed during a **measurable storm event**.

Qualitative monitoring requires a visual inspection of each stormwater outfall *regardless of* representative outfall status. Qualitative monitoring shall be performed quarterly as specified in **Table 6**, and during required analytical monitoring events (unless the permittee is required to perform further qualitative monitoring per the **Qualitative Monitoring Response**, below). Inability to monitor because of adverse weather conditions must be documented in the SPPP and recorded on the Qualitative Monitoring Report form (see *Adverse Weather* in Definitions). Only SDOs discharging *stormwater associated with industrial activity* must be monitored (See Definitions).

In the event an atypical condition is noted at a stormwater discharge outfall, the permittee shall document the suspected cause of the condition and any actions taken in response to the discovery. This documentation will be maintained with the SPPP.

**Table 6. Qualitative Monitoring Requirements**

Discharge Characteristics	Frequency <sup>1</sup>	Monitoring Location <sup>2</sup>
Color	quarterly	SDO
Odor	quarterly	SDO
Clarity	quarterly	SDO
Floating Solids	quarterly	SDO
Suspended Solids	quarterly	SDO
Foam	quarterly	SDO
Oil Sheen	quarterly	SDO
Erosion or deposition at the outfall	quarterly	SDO
Other obvious indicators of stormwater pollution	quarterly	SDO

Footnotes:

- <sup>1</sup> Monitoring Frequency: Four times per year during a **measurable storm event** unless other provisions of this permit prompt monthly monitoring. See **Table 7** for schedule of monitoring periods through the end of this permitting cycle. The permittee must continue qualitative monitoring throughout the permit renewal process until a new permit is issued.
- <sup>2</sup> Monitoring Location: Qualitative monitoring shall be performed at each stormwater discharge outfall (SDO) regardless of representative outfall status.

**Table 7. Monitoring Schedule**

Monitoring period <sup>1,2</sup>	Sample Number	Start	End
Year 1 – Period 1	1	May 24, 2016	September 30, 2016
Year 1 – Period 2	2	October 1, 2016	December 31, 2016
Year 1 – Period 3	3	January 1, 2017	March 31, 2017

Year 1 – Period 4	4	April 1, 2017	June 30, 2017
Year 2 – Period 1	5	July 1, 2017	September 30, 2017
Year 2 – Period 2	6	October 1, 2017	December 31, 2017
Year 2 – Period 3	7	January 1, 2018	March 31, 2018
Year 2 – Period 4	8	April 1, 2018	June 30, 2018
Year 3 – Period 1	9	July 1, 2018	September 30, 2018
Year 3 – Period 2	10	October 1, 2018	December 31, 2018
Year 3 – Period 3	11	January 1, 2019	March 31, 2019
Year 3 – Period 4	12	April 1, 2019	June 30, 2019
Year 4 – Period 1	13	July 1, 2019	September 30, 2019
Year 4 – Period 2	14	October 1, 2019	December 31, 2019
Year 4 – Period 3	15	January 1, 2020	March 31, 2020
Year 4 – Period 4	16	April 1, 2020	June 30, 2020
Year 5 – Period 1	17	July 1, 2020	September 30, 2020
Year 5 – Period 2	18	October 1, 2020	December 31, 2020
Year 5 – Period 3	19	January 1, 2021	March 31, 2021
Year 5 – Period 4	20	April 1, 2021	April 30, 2021

**Footnotes:**

- 1 Maintain quarterly monitoring until either another permit is issued for this facility or until this permit is revoked or rescinded. The permittee must continue qualitative monitoring throughout the permit renewal process, even if a renewal permit is not issued until after expiration of this permit.
- 2 If no discharge occurs during the sampling period, the permittee must complete a monitoring report indicating “No Flow” or “No Discharge” within 30 days of the end of the sampling period.

Failure to monitor quarterly per permit terms may result in the Division requiring **monthly monitoring** for all parameters for a specified time period. “No discharge” from an outfall during a monitoring period does not constitute failure to monitor, as long as it is properly recorded.

If the permittee’s qualitative monitoring indicates that existing stormwater BMPs are ineffective, or that significant stormwater contamination is present, the permittee shall investigate potential causes, evaluate the feasibility of corrective actions, and implement those corrective actions within 30 days, per the **Qualitative Monitoring Response**, below. A **written record** of the permittee’s investigation, evaluation, and response actions shall be kept in the Stormwater Pollution Prevention Plan.

#### **Qualitative Monitoring Response**

Qualitative monitoring is for the purposes of evaluating SPPP effectiveness, identifying new potential sources of stormwater pollution, and prompting the permittee's response to pollution. If the permittee repeatedly fails to respond effectively to correct problems identified by qualitative monitoring, or if the discharge causes or contributes to a water quality standard violation, **the Division may but is not limited to:**

- require that the permittee revise, increase, or decrease the monitoring frequency for some or all parameters (analytical or qualitative)
- require the permittee to install structural stormwater controls;
- require the permittee to implement other stormwater control measures;
- require the permittee to perform upstream and downstream monitoring to characterize impacts on receiving waters; or
- require the permittee implement site modifications to qualify for a No Exposure Exclusion.